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# The Impact of Planned Behavior and Entrepreneurial Education on Entrepreneurial Intention among Accounting Students of Nanning University[†]

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## Abstract

In recent years, the number of college graduates in China has been rising, and the entrepreneurship of college students can not only ease the employment pressure, but also promote the sustained growth of the economy. With the implementation of the national policy of "mass entrepreneurship and innovation", how to carry out entrepreneurial education in colleges and universities has become a popular and critical issue. Based on the theory of planned behavior, this study analyzes the factors affecting the entrepreneurial willingness of accounting majors in Nanning College of Guangxi from the perspectives of entrepreneurial attitude, subjective norms, perceived behavioral control and entrepreneurial education. The study adopts quantitative questionnaire survey method, and utilizes descriptive statistics, correlation and regression analysis. The results show that entrepreneurial attitude, subjective norms, perceived behavioral control and entrepreneurial education positively affect students' entrepreneurial intention. Specifically, the more positive entrepreneurial attitudes, the more supportive subjective norms, the stronger perceived behavioral control, and the more colorful entrepreneurship education in schools, the stronger entrepreneurial intentions of students. This study not only enriches the theoretical research in the field of entrepreneurship in China, but also provides an important theoretical basis for entrepreneurship education and related entrepreneurship guidance for accounting majors in colleges and universities. Therefore, colleges and universities should innovate the form of entrepreneurship education for college students, improve the construction of entrepreneurship education system, change students' entrepreneurial attitudes from multiple perspectives, and create a favorable entrepreneurial atmosphere to enhance their entrepreneurial intention.

**Keywords:** Attitude, Subjective norms, Perceived behavioral control, Entrepreneurial education, Entrepreneurial intention

## Introduction

With the implementation of the "mass entrepreneurship and innovation" policy, there has been a growing trend in college students' participation in entrepreneurial activities. In recent years, there has been an increasing focus on the impact of entrepreneurial education on entrepreneurial intention from the perspective of the theory of planned behavior, making it a major research topic in the field of entrepreneurship. The TPB is a well-known classical theory that examines how human action intention is influenced from a cognitive standpoint. Sociologists and managers alike utilize this theory extensively. The theoretical underpinning of college students' entrepreneurial purpose has also been explained by this theory (Dou & Fu, 2023). The TPB-related research has shown that a variety of elements, such as attitudes, perceived behavioral control and subjective norms, can influence the formation or modification of students' entrepreneurial intentions (Su et al., 2021). In addition, Shen (2018) used the TPB to explore the impact of entrepreneurial education on entrepreneurial intention with college students as the research subjects. The study confirms that courses and activities on entrepreneurship, as well as a favorable economic environment, can help college students form stronger entrepreneurial motivations. Some studies on the theoretical analysis of entrepreneurial education in colleges and universities show that entrepreneurial education can effectively enhance students' entrepreneurial intentions and plays a crucial role in cultivating

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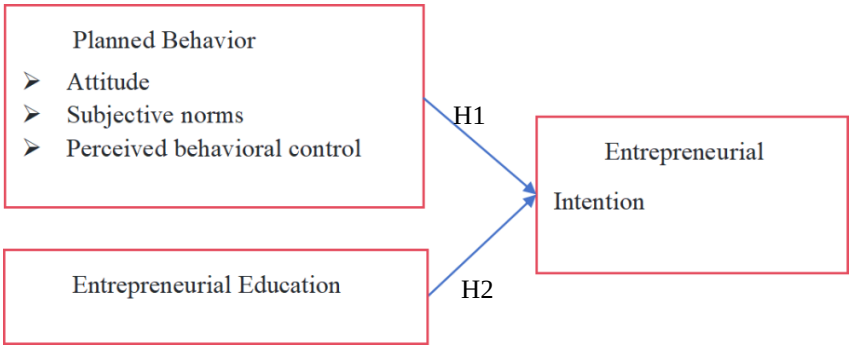
students' entrepreneurial spirit and entrepreneurial ability. Through entrepreneurial education, students' entrepreneurial perception can be enhanced, which in turn increases their entrepreneurial intention (Bing, 2019). Therefore, the combination of the 3 dimensions of planned behavior "attitude, subjective norms, perceived behavioral control" and entrepreneurial education can effectively promote the formation and development of college students' entrepreneurial intention, which is of great practical significance and contemporary value for continuously deepening the reform of entrepreneurial education in colleges and universities, and optimizing the entrepreneurial ecological environment of college students through multiple measures.

The specific research question posed in this study is: Is there the impact of planned behavior and entrepreneurial education on entrepreneurial intention among accounting students of Nanning University?

The main objective of this study is to examine the impact of planned behavior (attitude, subjective norms, and perceived behavioral control) and entrepreneurial education on entrepreneurial intention of accounting students majoring of Nanning University.

Firstly, this study utilizes the theory of planned behavior as a theoretical foundation to investigate the factors influencing accounting students' entrepreneurial intentions. In the theoretical framework, planned behavior is considered as the independent variable, while entrepreneurial education is introduced as the second independent variable and entrepreneurial intention as the dependent variable. Specifically, this study examines attitude, subjective norms, and perceived behavioral control as the 3 dimensions of planned behavior and explores their overall relationship with entrepreneurial intentions in the context of entrepreneurial education.

Conceptual framework notes on the impact of planned behavior and entrepreneurial education on entrepreneurial intention




H1: There is the positive impact of Planned Behavior on Entrepreneurial Intention.

The model of planned behavior research in the field of entrepreneurship is based on the Theory of Planned Behavior. According to this idea, "how a person becomes an entrepreneur" can be well explained by the model established by the theory of planned behavior. The model emphasizes that individual entrepreneurial intentions drive individual entrepreneurial actions. Hou et al. (2019) conducted a study on the relationship and influence of entrepreneurial attitudes, subjective norms, and perceived behavioral control on entrepreneurial intentions, and they verified that planned behaviors play a positive role in promoting positive entrepreneurial intentions in individuals. Aloulou (2016) used a sample of 177 students from business schools (Aloulou, 2016) conducted a study using a sample of 177 business school students and concluded that planned behavior adequately explains an individual's intention to become an entrepreneur. Ma (2021) established a chain based on planned behavior that included entrepreneurial attitudes, subjective norms, perceived behavioral control, and entrepreneurial intentions and found that each of these variables was associated with entrepreneuriality.

H1(a): There is the positive impact of Attitude on Entrepreneurial Intention.

Attitude is a person's perception of engaging in a particular behavior, whether that perception is for or against (Hill et al., 1977). It is a person's tendency to psychologically and emotionally approve of or like something (Zhang & Wang, 2007). Choukir et al. 2019 came to a similar conclusion that positive entrepreneurial attitudes significantly increase entrepreneurial intentions among students. Peng et al. 2021

investigated the logical relationship between attitude and entrepreneurial intention and verified that positive attitude has a positive effect on entrepreneurial intention. Yasa et al. 2023 studied the relationship between entrepreneurial attitude and entrepreneurial intention among Bali university students, and the results showed that Bali university students' positive entrepreneurial attitudes have a significant positive effect on their entrepreneurial intentions, which further strengthens the conclusions drawn by previous scholars. In conclusion, these findings suggest that the more positive the students' entrepreneurial attitudes are, the more likely they are to become entrepreneurs; and becoming entrepreneurs is the strength they need for future security, opportunities for self-challenge, and identity presentation.

H1(b): There is the positive impact of Subjective norms on Entrepreneurial Intention.

Subjective norms pertain to the degree to which an individual perceives the expectations of specific behaviors from influential others and the extent to which the individual conforms to those expectations. Studies have indicated that subjective norms positively impact entrepreneurial intentions (Daniela et al., 2016). Ma (2021) further contends that subjective norms manifest in the influence of parents on their children's entrepreneurial aspirations. More precisely, an entrepreneur's decision to initiate a business is directly influenced by their parents' expertise in the business realm. Moreover, a parent's success or failure as an entrepreneur can either positively or negatively affect their children's entrepreneurial ambitions. A parent's achievements might inspire a child to venture into entrepreneurship while a parent's setbacks are more likely to dissuade them. Alongside parental influence, external factors such as close friends, teachers, and classmates may also impact individual subjective norms. It should be noted though that according to Ajzen's study, subjective norms alone may not entirely elucidate entrepreneurial intentions.

H1(c): There is the positive impact of Perceived behavioral control on Entrepreneurial Intention.

The perceived difficulty in performing a specific task is commonly referred to as perceived behavioral control. Sun (2016) identified 7 dimensions of perceived behavioral control: Creativity, communication, leadership decision-making, technical control, organizational management, problem solving, and resource integration. Meanwhile, Zhang (2019) evaluated perceived control ability in 5 dimensions: Understanding the details of entrepreneurial operation design, mastering the entrepreneurial process, understanding the entrepreneurial project development and the challenges of the entrepreneurial and operational process, and the likelihood of entrepreneurial success. Additionally, Ma (2021) examined perceived control behaviors across 5 dimensions: Challenges of company operations; whether or not to establish a viable company; understanding the practical details of company establishment; developing entrepreneurial projects; and the likelihood of entrepreneurial success. The findings from these studies collectively suggest that perceived behavioral control plays a significant role in influencing entrepreneurial intentions.

H2: There is the positive impact of Entrepreneurial education on Entrepreneurial Intention.

Entrepreneurial education aims to increase students' willingness to engage in entrepreneurial activities by nurturing their awareness of entrepreneurship. According to Bing (2019), it has been confirmed that entrepreneurial education positively influences students and enhances their motivation to participate in entrepreneurial activities, drawing from the theoretical analytical framework of innovation and entrepreneurial education in colleges and universities. Additionally, Shen (2018) study demonstrates that college students can significantly improve their goals and actions through entrepreneurial education. In particular, engaging in various entrepreneurship-related activities on campus helps enhance students' knowledge and skill levels in entrepreneurship. It was also found that college students with practical experience are more inclined to pursue entrepreneurial activities. An investigation conducted at a financial university on the relationship between entrepreneurial intentions and entrepreneurial education among college students revealed that providing advice, lectures, and courses to members increases their motivation to pursue entrepreneurial ambitions, as well as providing them with necessary support (Deng et al., 2023).

## Methodology

This study utilized a quantitative questionnaire to gather data through the querying of respondents and recording of their responses. Questionnaires provide a means for collecting data from a large number of individuals and assessing their attitudes, beliefs, and values, which can in turn be used to identify population trends and patterns as well as evaluate the effectiveness of interventions. In this study, the Questionnaire

Star platform was selected for distributing and collecting questionnaires due to its cost-effectiveness, ability to facilitate rapid data collection, as well as its provisions for maintaining participant privacy and response objectivity. Moreover, special attention was given during questionnaire administration to ensure that questions were presented clearly and comprehensibly in order to minimize participant misinterpretation or inaccurate responses (Arundel, 2023).

The aim of this study is to investigate the impact of planning behavior and entrepreneurial education on entrepreneurial intentions. The selection of the population, sample size, and sampling method was carefully planned. The Taro-Yamane formula was utilized to determine the number of researchers, which was calculated as N = N/(1+Ne^2). The total population "N" stands at 1,560 and according to this formula, 318 students majoring in Accounting at Nanning University were chosen as the sample size for the research questionnaire. This study employed a stratified sampling method, which is a type of probability sampling. Firstly, the proportion of each grade's total number of students to the total sample size was determined based on the latest data released by the official website of Nanning University. Secondly, the sample size of each grade was determined based on the proportion of each grade's total number of students to the total sample size. The specific sample size is presented in the table below.

**Table 1** Stratified random sampling.

| Grade | N | % | N = 318 |
|---|---|---|---|
| Freshman | 457 | 29 % | 92 |
| Sophomore | 418 | 27 % | 86 |
| Junior | 370 | 24 % | 76 |
| Senior | 315 | 20 % | 64 |
| Total | 1,560 | 100 % | 318 |

The data for this study were collected through a questionnaire designed in line with the conceptual framework and research objectives. The questionnaire comprised 4 main sections: The first section gathered information on participants' basic demographics, including their grade, gender, and part-time work or entrepreneurship experience. It also inquired about their personal experience with entrepreneurship as well as that of their friends and family, consisting of a total of 5 questions. The second section delved into the development of planned behavior and included fifteen questions addressing 3 fundamental dimensions: Attitude, subjective norms, and perceived behavior control. The third section focused on entrepreneurial education and involved 5 questions. Lastly, the fourth section examined entrepreneurial intention through another set of 5 questions. Following the conceptual framework, research objectives, and hypotheses outlined in this study, an initial draft of the questionnaire was formulated as presented in **Table 2**.

**Table 2** Distribution of dimensions in the questionnaire.

| Variable | Number of questions | References |
|---|---|---|
| Demographic | Q1 - Q5 | |
| 1. Gender | | |
| 2. Grade | | |
| 3. Part time experience | | |
| 4. Personal entrepreneurial experience | | |
| 5. Entrepreneurial experience of relatives and friends | | |

| Variable | Number of questions | References |
|---|---|---|
| TPB Constructs | | (Ma, 2021) |
| X1: Attitude | Q1 - Q5 | |
| X2: Subjective norms | Q6 - Q10 | |
| X3: Perceived Behavior Control | Q11 - Q15 | |
| Entrepreneurial Education | Q1 - Q5 | (Deng et al., 2023) |
| Entrepreneurial Intention | Q1 - Q5 | (Zhang, 2019) |

This study utilized the Questionnaire Star platform for designing, distributing, and collecting research questionnaires. The raw data collected were subsequently collated and analyzed using SPSS statistical software and Excel worksheets to examine the relationship between the variables of theoretical constructs of planned behavior, entrepreneurial education, and entrepreneurial intention among university students. Conclusions were drawn through hypothesis testing.

Step 1: Present descriptive data in the form of mean, frequency, standard deviation, and percentage, and report the range of scores for each variable. The survey collected data on attitudes across 5 levels.

| Answer | Score |
|---|---|
| Strongly agree | 5 points |
| Agree | 4 points |
| Neutral | 3 points |
| Disagree | 2 points |
| Strongly disagree | 1 point |

(Max - Min) / class = (5 - 1)/5 = 0.80 class range.

The levels of attitude reporting will be as follows:

| Range | Indicate |
|---|---|
| 4.24 - 5.00 | Strongly agree |
| 3.43 - 4.23 | Agree |
| 2.62 - 3.42 | Neutral |
| 1.81 - 2.61 | Disagree |
| 1.00 - 1.80 | Strongly disagree |

Step 2: Inferential statistics of correlation analysis and regression analysis were used in this study. Descriptive indicators such as frequency, mean and standard deviation were used to provide insights into the constructs of theory of planned behavior, entrepreneurship education and entrepreneurial intention among university students. In terms of correlation analysis, Pearson's correlation coefficient was used as a statistical method to measure the degree of correlation between two or more variables. This method allows for an objective assessment of the strength and direction of the correlation between the variables and helps to understand the interrelationships in the data more comprehensively. In addition, in the multiple regression analysis section, the relationship between the construction of the theory of planned behavior and university students' entrepreneurial intentions was investigated (Ma, 2021) and the effect of entrepreneurship schooling on this relationship was examined (Deng et al., 2023). Multiple regression

analysis is a statistical method that enables the study of the relationship between a dependent variable and multiple independent variables. With the help of this method, it is possible to identify the main factors affecting the dependent variable and to quantitatively verify the effect of the independent variables on them. The advantage is that multiple independent variables are carefully considered, thus providing a more complete picture of how the dependent variable is affected and revealing possible interactions between independent factors.

## Results and discussion

Basic information of respondents. Firstly, the data from the recovered valid questionnaires were analyzed using demographic descriptive statistics. The study focused on 318 students majoring in accounting at the Business School of Nanning University, GuangXi. Basic demographic information including gender, grade level, part-time job experience, and entrepreneurial experience of both the students and their friends and relatives was collected. The statistical results are presented in **Table 3** below.

**Table 3** Descriptive statistics on demographic information.

| Items | Frequency | Valid percent | Cumulative percent |
|---|---|---|---|
| Gender | | | |
| Male | 98 | 30.800 | 30.800 |
| Female | 220 | 69.200 | 100.000 |
| Grade | | | |
| Year 1 | 92 | 28.900 | 28.900 |
| Year 2 | 86 | 27.000 | 56.000 |
| Year 3 | 76 | 23.900 | 79.900 |
| Year 4 | 64 | 20.100 | 100.000 |
| Year 5 Or More | 0 | 0.000 | 100.000 |
| Part-Time experience | | | |
| No | 93 | 29.200 | 29.200 |
| Yes | 225 | 70.800 | 100.000 |
| Personal entrepreneurial experiences | | | |
| Never | 255 | 80.200 | 80.200 |
| Once | 54 | 17.000 | 97.200 |
| Starting A Business | 9 | 2.800 | 100.000 |
| Friends' entrepreneurial experiences | | | |
| Never | 71 | 22.300 | 22.300 |
| Once | 175 | 55.000 | 77.400 |
| Starting A Business | 72 | 22.600 | 100.000 |

The data presented in **Table 3** reveals that out of the 318 university students surveyed, a substantial majority of 220 respondents (69.2 %) identified as female, while 98 participants (30.8 %) were male. This distribution clearly indicates a notable overrepresentation of female students within the sample population.

The survey showed that among the 318 valid respondents, 28.90 % were in their first year of college, 27 % were in their second year, 23.90 % were in their third year, and 20.10 % were in their fourth year. There were no respondents in their fifth year or above. Additionally, of these college students, it was found that 29.20 % had no part-time experience and that a substantial majority (70.80 %) had engaged in part-time work during their studies.

Furthermore, the survey results regarding entrepreneurial experiences revealed that a significant proportion (80.20 %) had not engaged in entrepreneurial ventures before this study took place; only about one-fifth reported having prior exposure to entrepreneurship and an even smaller percentage (2.80 %) were actively involved in initiating their own business endeavors.

Moreover, the findings shed light on the entrepreneurial landscape within the participants' social circles revealing that about one-fifth of their relatives and acquaintances lacked any entrepreneurial experience while approximately half had ventured into entrepreneurship at some point with around one-fifth currently pursuing entrepreneurial activities.

These results indicate a relatively low propensity for entrepreneurship among university students; however it is noteworthy that a considerable portion of the respondents' social networks encompass individuals with entrepreneurial inclinations or active pursuits.

Reliability analysis involves evaluating the consistency and stability of measurement tools, such as questionnaires and scales, by conducting repeated measurements. Internal consistency reliability assesses the homogeneity of various items used to measure the same latent construct, typically measured using Cronbach's alpha (α) coefficient. The α value ranges from 0 to 1, with higher values indicating greater internal consistency; a value of $\alpha \geq 0.7$ is considered acceptable, $\alpha \geq 0.8$ is good, and $\alpha \geq 0.9$ denotes excellent internal consistency.

1) Attitude.

**Table 4** Descriptive statistics on attitude.

| Name | Total correlation of correction items (CITC) | The alpha coefficient of The deleted entry | Cronbach alpha coefficient |
|---|---|---|---|
| Entrepreneurship is very attractive to me. | 0.771 | 0.833 | 0.875 |
| Entrepreneurship can bring me satisfaction. | 0.795 | 0.827 | 0.875 |
| The advantages of entrepreneurship outweigh the disadvantages for me. | 0.709 | 0.848 | 0.875 |
| If I have the opportunity and resources, I am very happy to start a business. | 0.592 | 0.874 | 0.875 |
| I prefer entrepreneurship to other employment options. | 0.664 | 0.859 | 0.875 |

As presented in **Table 4**, the overall Cronbach's alpha coefficient is 0.875, indicating excellent internal consistency reliability. The item-deleted alpha values are all lower than the overall value of 0.875, implying that removing any item would diminish the scale's reliability. Furthermore, the corrected item-total correlations (CITC) for all analyzed items surpass the recommended threshold of 0.4, demonstrating a robust correlation between the items and the overall construct. In conclusion, the data exhibits remarkable reliability with a Cronbach's alpha of 0.875, comprehensively reflecting the high quality and precision of the measurement instrument.

2) Subjective norms.

**Table 5** Descriptive statistics on subjective norms.

| Name | Total correlation of correction (CITC) | The alpha coefficient of The deleted entry | Cronbach alpha coefficient |
|---|---|---|---|
| My closest family supports me to start my business. | 0.731 | 0.871 | 0.893 |
| My closest friend supports me to start a business. | 0.798 | 0.856 | 0.893 |
| The teachers I know best supports me to start a business. | 0.779 | 0.861 | 0.893 |
| People who are important to me support me to start my business. | 0.769 | 0.863 | 0.893 |
| I care about the views of the above relatives and friends on entrepreneurship. | 0.615 | 0.892 | 0.893 |

As presented in **Table 5**, the overall Cronbach's alpha coefficient is 0.893, indicating excellent internal consistency reliability. The item-deleted alpha values are all lower than the overall value of 0.893, implying that removing any item would diminish the scale's reliability. Furthermore, the corrected item-total correlations (CITC) for all analyzed items surpass the recommended threshold of 0.4, demonstrating a robust correlation between the items and the overall construct. In conclusion, the data exhibits remarkable reliability with a Cronbach's alpha of 0.893, comprehensively reflecting the high quality and precision of the measurement instrument.

3) Perceived Behavior Control.

**Table 6** Descriptive statistics on perceived behavior control.

| Name | Total correlation of correction (CITC) | The alpha coefficient of The deleted entry | Cronbach alpha coefficient |
|---|---|---|---|
| I understand the necessary details required for Entrepreneurship. | 0.576 | 0.727 | 0.777 |
| I know how to develop an entrepreneurial project. | 0.684 | 0.686 | 0.777 |
| It is easy for me to set up and run a business. | 0.455 | 0.767 | 0.777 |
| If I try to start a business, my probability of success will be high. | 0.557 | 0.736 | 0.777 |
| I am going to start a promising enterprise. | 0.490 | 0.756 | 0.777 |

As depicted in **Table 6**, the overall Cronbach's alpha coefficient of 0.777 indicates a high level of internal consistency reliability. All item-deleted alpha values are lower than the overall value of 0.777, suggesting that eliminating any item would adversely impact the scale's reliability. Moreover, the corrected item-total correlations for all items exceed the recommended threshold of 0.4, demonstrating strong correlations between the individual items and the overall construct. In summary, the data exhibits commendable reliability with a Cronbach's alpha of 0.777, comprehensively reflecting the rigorous quality and sound psychometric properties of the measurement instrument.

4) Entrepreneurial Education.

**Table 7** Descriptive statistics on entrepreneurial education.

| Name | Total correlation of correction (CITC) | The alpha coefficient of The deleted entry | Cronbach alpha coefficient |
|---|---|---|---|
| The school has opened a wealth of entrepreneurship classes for me to study. | 0.772 | 0.926 | 0.932 |
| The school often holds training or lectures related to entrepreneurship. | 0.850 | 0.911 | 0.932 |
| The school actively builds a multi-level entrepreneurial practice platform. | 0.869 | 0.908 | 0.932 |
| The school strongly encourages me to form or participate in entrepreneurial teams, participate in entrepreneurial competitions or practice in entrepreneurial parks. | 0.827 | 0.916 | 0.932 |
| The school has formulated relevant supporting policies to support entrepreneurship, which is of great help to me. | 0.787 | 0.923 | 0.932 |

As presented in **Table 7**, the overall Cronbach's alpha coefficient is 0.932, indicating excellent internal consistency reliability. The item-deleted alpha values are all lower than the overall value of 0.932, implying that removing any item would diminish the scale's reliability. Furthermore, the corrected item-total correlations (CITC) for all analyzed items surpass the recommended threshold of 0.4, demonstrating a robust correlation between the items and the overall construct. In conclusion, the data exhibits remarkable reliability with a Cronbach's alpha of 0.932, comprehensively reflecting the high quality and precision of the measurement instrument.

**Table 8** Description of item-total statistics.

| Name | Cronbach alpha | Number of items |
|---|---|---|
| Attitude | 0.875 | 5 |
| Subjective Norms | 0.893 | 5 |
| Perceptual Behavior Control | 0.777 | 5 |
| Entrepreneurial Education | 0.932 | 5 |
| Entrepreneurial Intention | 0.890 | 5 |

As presented in **Table 8**, the Cronbach's alpha values indicate strong internal consistency among the measured constructs, with coefficients of 0.875 for Attitude, 0.893 for Subjective Norms, 0.777 for Perceived Behavioral Control, 0.932 for Entrepreneurship Education, and 0.890 for Entrepreneurial Intention. Particularly noteworthy are the high Cronbach's alpha values of 0.932 and 0.890 for Entrepreneurship Education and Entrepreneurial Intention respectively, indicating excellent reliability for these key variables. Additionally, the overall standardized reliability coefficient of 0.915 demonstrates exceptional reliability across the entire questionnaire section.

Descriptive statistics for planed behavior, entrepreneurial education and entrepreneurial intention. The results of the descriptive statistical analysis of the Entrepreneurial Intention are shown in the following **Table 9**.

**Table 9** Description of item-total statistics.

| Variable name | Minimum | Maximum | Mean | std | Skewness | Kurtosis |
|---|---|---|---|---|---|---|
| Entrepreneurship is very attractive to me. | 1 | 5 | 3.450 | 0.811 | −0.486 | 1.158 |
| Entrepreneurship can bring me satisfaction. | 1 | 5 | 3.530 | 0.793 | −0.629 | 1.415 |
| The advantages of entrepreneurship outweigh the disadvantages for me. | 1 | 5 | 3.360 | 0.868 | −0.262 | 0.582 |
| If I have the opportunity and resources, I am very happy to start a business. | 1 | 5 | 3.950 | 0.739 | −0.958 | 2.430 |
| I prefer entrepreneurship to other employment options. | 1 | 5 | 3.330 | 0.831 | −0.191 | 0.338 |
| My closest family supports me to start my business. | 1 | 5 | 3.310 | 0.766 | 0.124 | 0.773 |
| My closest friend supports me to start a business. | 1 | 5 | 3.500 | 0.785 | −0.089 | 0.606 |
| The teachers I know best supports me to start a business. | 1 | 5 | 3.480 | 0.756 | 0.306 | 0.405 |
| People who are important to me support me to start my business. | 1 | 5 | 3.540 | 0.755 | −0.128 | 0.406 |
| I care about the views of the above relatives and friends on entrepreneurship. | 1 | 5 | 3.570 | 0.723 | −0.154 | 0.636 |
| I understand the necessary details required for Entrepreneurship. | 1 | 5 | 3.280 | 0.902 | −0.193 | 0.375 |
| I know how to develop an entrepreneurial project. | 1 | 5 | 3.000 | 0.925 | 0.103 | −0.146 |
| It is easy for me to set up and run a business. | 1 | 5 | 3.360 | 0.868 | −0.262 | 0.582 |
| If I try to start a business, my probability of success will be high. | 1 | 5 | 2.900 | 0.776 | 0.013 | 0.514 |
| I am going to start a promising enterprise. | 1 | 5 | 2.900 | 0.882 | 0.059 | −0.036 |
| The school has opened a wealth of entrepreneurship classes for me to study. | 1 | 5 | 3.440 | 0.779 | −0.465 | 0.919 |
| The school often holds training or lectures related to entrepreneurship. | 1 | 5 | 3.470 | 0.785 | −0.290 | 0.560 |
| The school actively builds a multi-level entrepreneurial practice platform. | 1 | 5 | 3.520 | 0.756 | −0.350 | 0.880 |
| The school strongly encourages me to form or participate in entrepreneurial teams, participate in entrepreneurial competitions or practice in entrepreneurial parks. | 1 | 5 | 3.640 | 0.777 | −0.367 | 0.664 |
| The school has formulated relevant supporting policies to support | 1 | 5 | 3.560 | 0.775 | −0.354 | 0.782 |

| Variable name | Minimum | Maximum | Mean | std | Skewness | Kurtosis |
|---|---|---|---|---|---|---|
| entrepreneurship, which is of great help to me. | | | | | | |
| I seriously thought about starting a business. | 1 | 5 | 3.370 | 0.866 | −0.554 | 0.446 |
| If I had the chance and could make my own decision, I would choose to start a business. | 1 | 5 | 3.640 | 0.812 | −0.297 | 0.367 |
| Given the reality and constraints (lack of funding, etc.), I would still choose to start a business. | 1 | 5 | 3.470 | 0.865 | −0.251 | 0.002 |
| I decided to start my own business in the future. | 1 | 5 | 3.570 | 0.874 | 0.072 | −0.321 |

The analysis of data in **Table 5** demonstrates that the data distribution of the variables generally conforms to the assumption of normal distribution. Firstly, the absolute values of kurtosis for most variables do not exceed 3, indicating a moderate degree of peakedness or flatness in the data distribution, neither excessively steep nor excessively flat. Simultaneously, the skewness values of the variables are mostly close to 0, with absolute values less than 1, reflecting an overall symmetrical distribution without significant skewness. Although individual variables such as “I prefer to start my own business” and “Teachers support me to start my own business” exhibit slightly higher skewness values above 0.2, they still fall within an acceptable range. Secondly, the mean values of the variables are generally situated between 3 and 4, while the standard deviations are controlled within the range of 0.7 to 0.9, indicating that the participants’ ratings are relatively concentrated, with a moderate degree of variation. Overall, the high data quality lays a solid foundation for subsequent correlation analyses and hypothesis testing.

From the aforementioned data analysis, it can be deduced that entrepreneurial attitudes, subjective norms, perceived behavioral control, and entrepreneurial education play crucial roles in exploring the factors influencing entrepreneurial intentions among college students. Specifically, college students tend to possess proactive entrepreneurial tendencies in order to seize future entrepreneurial opportunities, while their entrepreneurial orientations are also influenced by the opinions of those around them. Furthermore, entrepreneurial education and support measures provided by universities can promote and cultivate entrepreneurial intentions among college students.

Pearson correlation analysis is a widely adopted statistical technique designed to quantify the linear association between two continuous variables. This study uses Pearson coefficient to reflect the results of correlation analysis, as shown in the following table.

**Table 10** Relationship between planned behavior and entrepreneurial education on entrepreneurial intention.

| | Mean | std | | Attitude | Subjective norms | Perceptual behavior control | Entrepreneurial education | Entrepreneurial intention |
|---|---|---|---|---|---|---|---|---|
| Attitude | 3.523 | 0.661 | Pearson correlation | 1 | | | | |
| | | | Sig. (2-tailed) | | | | | |
| Subjective norms | 3.482 | 0.634 | Pearson correlation | 0.727** | 1 | | | |
| | | | Sig. (2-tailed) | 0.000 | | | | |
| Perceptual behavior control | 3.086 | 0.634 | Pearson correlation | 0.683** | 0.627** | 1 | | |
| | | | Sig. (2-tailed) | 0.000 | 0.000 | | | |
| Entrepreneurial Education | 3.525 | 0.687 | Pearson correlation | 0.514** | 0.524** | 0.542** | 1 | |
| | | | Sig. (2-tailed) | 0.000 | 0.000 | 0.000 | | |
| Entrepreneurial Intention | 3.516 | 0.665 | Pearson correlation | 0.682** | 0.665** | 0.644** | 0.604** | 1 |
| | | | Sig. (2-tailed) | 0.000 | 0.000 | 0.000 | 0.000 | |

Correlation is significant at the 0.01 level (2-tailed).

To quantitatively examine the interrelationships among attitude, subjective norm, perceived behavioral control, entrepreneurship education, and entrepreneurial intention, the present study employed Pearson's product-moment correlation analysis. The findings revealed a statistically significant positive correlation between entrepreneurial intention and entrepreneurial attitude ($r = 0.682$, $p < 0.01$), suggesting that a favorable attitude towards entrepreneurship is associated with heightened entrepreneurial intentions. Moreover, entrepreneurial intention exhibited a significant positive correlation with subjective norm ($r = 0.665$, $p < 0.01$), implying that supportive perceptions from significant others regarding entrepreneurial pursuits are positively linked to an individual's entrepreneurial inclination. Additionally, a significant positive correlation manifested between entrepreneurial intention and perceived behavioral control ($r = 0.644$, $p < 0.01$), indicating that individuals' perceived capabilities in executing entrepreneurial actions are positively related to their entrepreneurial volition. Lastly, a significant positive correlation emerged between entrepreneurial intention and the level of entrepreneurship education ($r = 0.604$, $p < 0.01$), suggesting that high-quality entrepreneurial education plays a facilitative role in fostering students' entrepreneurial aspirations.

This study explores the impact of planned behavior and entrepreneurial education on entrepreneurial intention, the results of the regression analysis are shown in the table below.

**Table 11** Regression analysis of planned behavior and entrepreneurial education on entrepreneurial intention.

| | Unstandardized coefficients | | Standardized coefficients | | Sig. | VIF |
|---|---|---|---|---|---|---|
| | B | Std. Error | Beta | t | | |
| (Constant) | 0.307 | 0.151 | | 2.036 | 0.043 | |
| attitude | 0.263 | 0.058 | 0.262 | 4.527 | 0.000 | 2.616 |
| Subjective norms | 0.237 | 0.058 | 0.226 | 4.113 | 0.000 | 2.359 |
| Perceptual behavior control | 0.197 | 0.055 | 0.188 | 3.587 | 0.000 | 2.154 |
| Entrepreneurial education | 0.241 | 0.043 | 0.250 | 5.599 | 0.000 | 1.555 |
| $R^2 = 0.600$, Adjust $R^2 = 0.595$, F = 117.545, Sig. = $0.000^{***}$ | | | | | | |

Note: $^{***}$ Sig. < 0.001

As evidenced by the regression analysis table, the model equation can be formulated as: Entrepreneurial Intention = 0.307 + $0.263^{*}$ Attitude + $0.237^{*}$ Subjective Norms + $0.197^{*}$ Perceived Behavioral Control + $0.241^{*}$ Entrepreneurship Education. The adjusted R-squared value of 0.595 indicates that 59.5 % of the variation in entrepreneurial intention can be accounted for by attitude, subjective norms, perceived behavioral control, and entrepreneurship education. A multicollinearity diagnostic test was conducted, and the obtained Variance Inflation Factor (VIF) values were all below 5, suggesting the absence of multicollinearity issues within the model. Furthermore, the model was subjected to an F-test, which it passed (F = 117.545, $p < 0.01$), signifying that at least one of the predictors—attitude, subjective norms, perceived behavioral control, or entrepreneurship education—exerts a statistically significant effect on entrepreneurial intention. The final analysis results are as follows:

The regression coefficient for attitude is 0.263 (t = 4.527, $p < 0.01$), indicating a significant positive influence of attitude on entrepreneurial intention. The regression coefficient for subjective norms is 0.237 (t = 4.113, $p < 0.01$), suggesting a significant positive impact of subjective norms on entrepreneurial intention. The regression coefficient for perceived behavioral control is 0.197 (t = 3.587, $p < 0.01$), implying a significant positive effect of perceived behavioral control on entrepreneurial intention. Lastly, the regression coefficient for entrepreneurship education is 0.241 (t = 5.599, $p < 0.01$), demonstrating a significant positive influence of entrepreneurship education on entrepreneurial intention. Therefore, all hypotheses are supported by the empirical evidence.

In order to ensure the accuracy of the results of the regression analysis of planned behavior and entrepreneurial education on entrepreneurial intention, this study conducted a regression analysis of the 2 independent variables of the impact of planned behavior and entrepreneurial education on entrepreneurial intention.

**Table 12** Regression analysis of planned behavior on entrepreneurial intention.

| | Unstandardized coefficients | | Standardized coefficients | | Sig. | VIF |
|---|---|---|---|---|---|---|
| | B | Std. Error | Beta | t | | |
| (Constant) | 0.579 | 0.15 | | 3.874 | 0.000 | |
| Attitude | 0.297 | 0.06 | 0.296 | 4.912 | 0.000 | 2.587 |
| Subjective norms | 0.298 | 0.059 | 0.285 | 5.045 | 0.000 | 2.272 |

| | Unstandardized coefficients | | Standardized coefficients | | Sig. | VIF |
|---|---|---|---|---|---|---|
| | B | Std. Error | Beta | t | | |
| Perceptual behavior control | 0.276 | 0.056 | 0.263 | 4.959 | 0.000 | 2.013 |
| $R^2 = 0.560$, Adjust $R^2 = 0.556$, F = 133.383, Sig. = $0.000^{***}$ | | | | | | |

Note: *** Sig. < 0.001

The regression analysis of planned behavior on entrepreneurial intention is shown in **Table 8**. From the regression analysis table, it can be seen that the model formula is (excluding insignificant coefficients): Entrepreneurial Intention = 0.579 + $0.297^{*}$ Attitude + $0.298^{*}$ Subjective Norms + $0.276^{*}$ Perceptual Behavior Control, and the adjusted R-square is 0.556, which indicates that attitude, subjective norms, and perceptual behavior control explain 55.60 % of the variation in entrepreneurial intention. A multiple covariance test was carried out on the model, and the VIF values were all less than 5, indicating that there is no covariance problem in the model. An F-test was carried out on the model, and it was found that the model passed the F-test (F = 133.383, sig < 0.01), which indicates that the attitude, subjective norms, and perceptual behavior control have an effect on entrepreneurial intention.

The regression analysis results indicate that attitude (β = 0.297, sig < 0.01) has a significant positive influence on entrepreneurial intention, with the coefficient falling within the range of 0.000 to 4.912. Similarly, subjective norms (β = 0.298, sig < 0.01) exerts a significant positive influence on entrepreneurial intention, with the coefficient also ranging from 0.000 to 5.045. Furthermore, perceived behavioral control (β = 0.276, sig < 0.01) significantly and positively impacts entrepreneurial intention, as its coefficient lies between 0.000 and 4.959.

**Table 13** Regression analysis of entrepreneurial education on entrepreneurial intention.

| | Unstandardized Coefficients | | Standardized Coefficients | | Sig. | VIF |
|---|---|---|---|---|---|---|
| | B | Std. Error | Beta | t | | |
| (Constant) | 1.457 | 0.156 | | 9.359 | 0.000 | |
| Entrepreneurial education | 0.584 | 0.043 | 0.604 | 13.477 | 0.000 | 1.000 |
| $R^2 = 0.365$, Adjust $R^2 = 0.363$, F = 181.626, Sig. = $0.000^{***}$ | | | | | | |

Note: ***Sig. < 0.001

The regression analysis of entrepreneurial education on entrepreneurial intention is shown in **Table 9**. From the regression analysis table, it can be seen that the model formula is (excluding insignificant coefficients): Entrepreneurial Intention = 1.457 + $0.584^{*}$ Entrepreneurial Education, and the adjusted R-square is 0.363, which indicates that entrepreneurial education explains 36.30 % of the variation in entrepreneurial intention. A multiple covariance test was carried out on the model, and the VIF values were all less than 5, indicating that there is no covariance problem in the model. An F-test was carried out on the model, and it was found that the model passed the F-test (F = 181.626, sig < 0.01), which indicates that the entrepreneurial education has an effect on entrepreneurial intention.

The regression analysis results indicate that entrepreneurial education (β = 0.584, sig < 0.01) has a significant positive influence on entrepreneurial intention, with the coefficient falling within an acceptable range.

Through regression analysis, this study validated the influence of planning behavior and entrepreneurship education on entrepreneurial intention. By conducting regression analyses, the model and research framework examining the impact of planning behavior and entrepreneurial education on

entrepreneurial intention were corroborated, thereby accomplishing the research objectives and addressing a series of research inquiries.

**Table 14** Summary of results of research hypothesis testing.

| Research hypotheses | Result |
|---|---|
| H1(a): There is the positive impact of Attitude on Entrepreneurial Intention. | Support |
| H1(b): There is the positive impact of Subjective norms on Entrepreneurial Intention. | Support |
| H1(c): There is the positive impact of Perceived behavioral control on Entrepreneurial Intention. | Support |
| H2: There is the positive impact of Entrepreneurial education on Entrepreneurial Intention. | Support |

The research findings presented in **Table 14** provide empirical corroboration for all the hypotheses. This discovery substantiates the significant positive correlation between planning behavior, entrepreneurship education, and entrepreneurial intention, thereby addressing the core research question: Is there the impact of planned behavior and entrepreneurial education on entrepreneurial intention among accounting students of Nanning University?

## Conclusions

Grounded in an extensive literature review, this study integrated Ajzen's Theory of Planned Behavior (TPB) while taking into account the specific context of the Business School at Nanning University. A field survey was conducted using a questionnaire comprising 35 items to collect data. Employing statistical techniques including mean analysis, analysis of variance (ANOVA), reliability analysis, correlation analysis, and multiple linear regression analysis, the study examined the entrepreneurial intentions among accounting students at the Business School of Nanning University. The research explored potential antecedents of entrepreneurial intentions from the perspectives of individual traits, TPB variables (attitudes, subjective norms, and perceived behavioral control), as well as entrepreneurship education factors. Based on the empirical analyses, the following key findings emerged:

1) The 3 constructs of the Theory of Planned Behavior (TPB): Attitude, subjective norms, and perceived behavioral control, as well as entrepreneurship education for college students, have exerted a significant positive impact on their entrepreneurial intention.

2) The TPB variables (attitude, subjective norms, perceived behavioral control) are significantly positively correlated with entrepreneurial intention, and entrepreneurial education is also significantly positively correlated with entrepreneurial intention.

Based on the empirical analysis results, it can be concluded that an individual's attitude towards entrepreneurship, perceived social normative pressure, judgment of their ability to control entrepreneurial behavior, and the entrepreneurial education received are important predictors of college students' entrepreneurial intention. A positive entrepreneurial attitude, a supportive social normative environment, higher perceived behavioral control, and high-quality entrepreneurial education intervention are conducive to improving the level of college students' entrepreneurial intention (Afiat et al., 2023). Other studies have found that entrepreneurial education can not only directly promote the formation of entrepreneurial intentions but also indirectly influence entrepreneurial intentions by enhancing perceived behavioral control and shaping positive entrepreneurial attitudes, ultimately driving the occurrence of actual entrepreneurial behaviors (Aliedan et al., 2022).

Through this research, the scope of application of the theory of planned behavior has been expanded, and new evidence for cross-situation applicability is provided. The mechanism by which entrepreneurial education affects entrepreneurial intention is discussed, deepening the understanding of its role. An influencing factors model of entrepreneurial intention is constructed and verified, laying the theoretical foundation for subsequent research. The action paths of key factors such as planned behavior and

entrepreneurial education are elucidated, enriching theoretical knowledge on the formation of willingness. Furthermore, this research provides a decision-making basis for curriculum setting and training of entrepreneurial education in colleges and universities, promoting the quality of teaching. It allows for the optimization of the entrepreneurial support environment based on the effects of influencing factors, and positively guides students' entrepreneurial intentions. Colleges and universities can also adjust training measures based on the results to tap students' entrepreneurial potential and improve the quality of entrepreneurs. It also provides reference suggestions for the government to formulate policies to encourage and support college students' entrepreneurship. The research results can be applied to the cultivation and promotion of college students' entrepreneurial intention in other regions. In summary, this study expands theoretical horizons, provides guidance for practical work, and has important reference value for promoting the reform of innovation and entrepreneurship education in colleges and universities and cultivating the entrepreneurial qualities of college students.

However, this study has certain limitations:

1) The representativeness of the sample needs to be improved. The research subjects are accounting students from Nanning University, with a relatively narrow sample range, which may not adequately reflect the situation of students from other majors or other regions.

2) The influencing factors are not comprehensive enough. Although this study considers major factors such as the theory of planned behavior and entrepreneurship education, entrepreneurial intention may also be influenced by other factors such as family environment, personal traits, and social environment.

3) The research method is relatively singular. Currently, it mainly adopts questionnaire surveys, lacking qualitative research methods to support and interpret the quantitative results.

Suggestions for future development:

1) Expand the sample range to include students from different majors, different universities, and even consider current students and graduates, to improve the representativeness and generalizability of the research results.

2) Further explore and identify other potential factors influencing students' entrepreneurial intention, to make the theoretical model more comprehensive.

3) Adopt multiple research methods, combining quantitative and qualitative approaches, such as interviews and case studies, to gain a deeper understanding of the research phenomena and results.

4) Propose specific intervention measures and recommendations targeting the important influencing factors, to guide practical work in better fostering students' entrepreneurial intention.

5) Consider conducting longitudinal studies to observe the dynamic changes in students' entrepreneurial intention and its influencing factors over time.

In summary, by broadening the research scope, enriching research methods, and deepening theoretical analysis, the study will have greater theoretical value and practical guiding significance.

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## References

Afiat, M. N., Rijal, S., Koesoemasari, D. R. S., Furqan, A. C., & V, M. K. (2023). Learning strategies in developing entrepreneurial intention among students: Theory of planned behavior approach. *Jurnal Kependidikan, 9*(2), 659-–659.

Aliedan, M. M., Elshaer, I. A., Alyahya, M. A., & Sobaih, A. E. E. (2022). Influences of university education support on entrepreneurship orientation and entrepreneurship intention: Application of theory of planned behavior. *Sustainability, 14*(20), 13097.

Aloulou, W. J. (2016). predicting entrepreneurial intentions of final year saudi university business students by applying the theory of planned behavior. *Journal of Small Business and Enterprise Development, 23*(4), 1142-1164.

Arundel, A. (2023). *Chapter 4: Questionnaire testing* (pp. 56-77). Cheltenham, United Kingdom: Edward Elgar Publishing.

Bing, H. (2019). Whose entrepreneurial willingness is actually stimulated by entrepreneurship education? --an empirical analysis based on innovation and entrepreneurship education policy in colleges and universities. *Exploration of Higher Education, 2019*(09), 111-118.

Choukir, J., Aloulou, W. J., Ayadi, F., & Mseddi, S. (2019). Influences of role models and gender on Saudi Arabian freshman students' entrepreneurial intention. *International Journal of Gender and Entrepreneurship, 11*(2), 186-206.

Daniela, M., Rainer, H., Norbert, K., & Birgit, W. W. (2016). The impact of entrepreneurship education on the entrepreneurial intention of students in science and engineering versus business studies university programs. *Technological Forecasting and Social Change, 104*, 172-179.

Deng, Z., Zhong, M., & Zhang, C. (2023). Research on the influencing factors of college students' entrepreneurial intention under the framework of the theory of planned behavior--a case study of a finance and economics college. *Education Watch, 12*(22), 14-18.

Dou, Y., & Fu, C. (2023). Research on college students' entrepreneurship influencing factors under the theory of planned behavior. *China Collective Economy, 6*, 83-85.

Hill, R. J., Fishbein, M., & Ajzen, I. (1977). Belief, attitude, intention and behavior: An introduction to theory and research. *Contemporary Sociology, 6*(2), 244.

Hou, F., Su, Y., Lu, M., & Qi, M. (2019). Model of the entrepreneurial intention of university students in the pearl river delta of china. *Frontiers in Psychology, 10*, 916.

Ma, X. (2021). *Research on the relationship between influencing factors of entrepreneurial behavior*. Beijing, China: CNKI.

Peng, H., Li, B., Zhou, C., & Sadowski, B. M. (2021). How does the appeal of environmental values influence sustainable entrepreneurial intention? *International Journal of Environmental Research and Public Health, 18*(3), 1070.

Shen, L. (2018). Empirical exploration of factors influencing entrepreneurship education on entrepreneurial intention in colleges and universities: Taking fuzhou area as an example. *Journal of Liuzhou Institute of Vocational Technology, 6*, 31-38.

Su, Y., Zhu, Z., Chen, J., Jin, Y., Wang, T., Lin, C. L., & Xu, D. (2021). Factors influencing entrepreneurial intention of university students in china: Integrating the perceived university support and theory of planned behavior. *Sustainability, 13*(8), 4519.

Sun, L. (2016). An empirical research based on the TPB theory exploring the impact factors of college students' sustainable entrepreneurial intentions. *Research in Educational Development, 36*(21), 37-43.

Yasa, N. N. K., Sukaatmadja, I. P. G., Santika, I. W., Suparna, G., & Ekawati, N. W. (2023). The role of entrepreneurship orientation and entrepreneurship attitudes in mediating the effect of entrepreneurship education on students' entrepreneurship intention. *Journal of Higher Education Theory and Practice, 23*(10), 6186.

Zhang, H., & Wang, E. (2007). Attitude and behavior relationship. *Advances in Psychological Science, 2007*(01), 163-168.

Zhang, Y. (2019). *An investigation of college students' entrepreneurial intention and its influencing factors based on TPB theory: A case study of two medical col leges in Guangzhou*. Beijing, China: CNKI.